

WHAT IS CLAIMED IS:

1. A mounting arrangement for a magnetoencephalography system headrest assembly forming a portion of a SQUID dewar and having a fixed headrest and an array of sensors, comprising:

a sensor array plate for positioning the sensors relative to the headrest;

an intermediate moveable mounting member;

a plurality of first rods interconnecting said array plate and said moveable mounting member, each one of said rods being composed of material expandable and contractible with changes in temperature; and

a plurality of second rods fixed at one of their ends relative to the dewar and being connected at their opposite ends to said moveable mounting member, said second rods being composed of said material;

whereby said moveable mounting member tends to be moved in one direction toward or away from said sensor array plate, and tends to be moved in an opposite direction away from or toward said array plate resulting in temperature changes affecting the first and second rods, so that said sensor array plate and its sensors maintain a substantially constant spacing between said sensors and said headrest with changes in temperature.

2. A mounting arrangement according to claim 1, wherein said first and second rods are each composed of quartz material.

3. A mounting arrangement according to claim 1, wherein said sensor array plate is supported from below by said first and second rods.

4. A mounting arrangement according to claim 1, wherein said moveable mounting member is positioned below said sensor array plate and said second rods extend upwardly therefrom.

5. A mounting arrangement according to claim 4, wherein said moveable mounting member is a ring.

6. A mounting arrangement according to claim 1, further including a fixed mounting ring rigidly attached to the dewar.

7. A mounting arrangement according to claim 1, wherein said headrest assembly being fixedly attached to the dewar.

8. A method of mounting a headrest and an array of sensors to a SQUID dewar of a magnetoencephalography system, comprising:

positioning the sensors relative to the headrest with a sensor array plate;

interconnecting the sensor array plate and an intermediate moveable mounting member with a plurality of first rods, each one of said rods being composed of material expandable and contractible with changes in temperature; and

interconnecting the moveable mounting member and the dewar with a plurality of second rods, each one of said second rods being composed of said material;

whereby said moveable mounting member tends to be moved in one direction toward or away from the sensor array plate, and tends to be moved in an opposite direction away from or toward said array plate resulting in temperature changes affecting the first and second rods, so that said sensor array plate and its sensors maintain a substantially constant spacing between said sensors and said headrest with changes in temperature.

9. A method according to claim 8, wherein said sensor array plate is supported from below by said first and second rods.

10. A method according to claim 8, wherein said moveable mounting member is positioned below said sensor array plate and said second rods extend upwardly therefrom.

11. A method according to claim 10, further including rigidly attaching the headrest to the dewar.